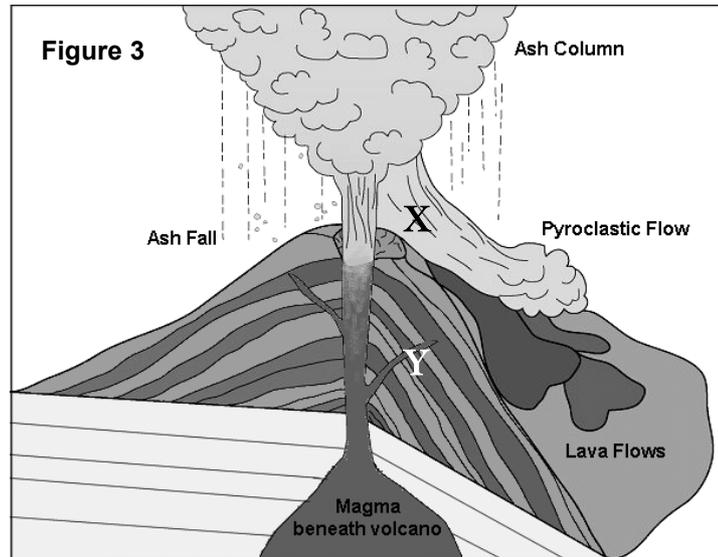


Extension Question: Igneous Processes

Qu. E2. **Figure 2** shows the structure of a *composite cone* type of volcano and the rock layers beneath.



- (a)
- What name is given to the depression at the top of the volcano, marked X?
 - Why is this type of volcano called a “*composite cone*”.
 - What is the difference between *magma* and *lava*?
 - What is meant by the term “*Ash*” in the diagram?
 - Y is a sheet-like *intrusion* that cuts through the rock layers of the volcano. What name is given to this type of igneous body?
- (b) Most of the lava flows from this volcano are of the slow-moving, rubbly type, sometimes called “Aa”, suggesting that the magma is quite *viscous*. What does “*viscous*” mean?
- (c) The eruption shown in **Figure 3** is producing an “Ash Column” that rises thousands of metres above the volcano summit.
- Explain how gases trapped in the magma help produce the ash column.
 - Sometimes the ash column can collapse forming a “*pyroclastic flow*”. Explain what is meant by a “*pyroclastic flow*”
- (d) Many people around the World live close to volcanoes so, when a volcano erupts, thousands of lives may be at risk.
- Suggest ONE sign that might indicate if a volcano is about to erupt.
 - Suggest TWO dangers that might result from *Ash Fall* near a volcano.

